

**National EPA-Tribal Science Council (TSC)
Conference Call Roll Call and Key Discussion Points
Monday, February 24, 2020
2:00–3:30 p.m. EST**

Roll Call

Tribal Caucus

- ☐ Region 1: William (Billy) Longfellow
(Passamaquoddy at Sipayik)
- ☐ Region 1 *Alternate*: Trevor White
(Passamaquoddy Tribe of Indian Township)
- ☒ Region 2: Neil Patterson (Tuscarora Nation)
- ☒ Region 4: Katie Tiger (Eastern Band of
Cherokee Indians)
- ☐ Region 4 *Alternate*: Jerry Cain (Mississippi
Band of Choctaw Indians)
- ☒ Region 5: Jeff Mears (Oneida Nation), Chair
- ☒ Region 6: Craig Kreman (Quapaw Tribe)
- ☐ Region 6 *Alternate*: Vacant
- ☒ Region 7: Page Hingst (Santee Sioux Nation of
Nebraska)
- ☒ Region 7 *Alternate*: Misha Mazurkewycz (Ponca
Tribe of Nebraska)
- ☒ Region 8: Joshua Tweeton (Spirit Lake Tribe)
- ☐ Region 8 *Alternate*: Allyson Two Bears
(Standing Rock Sioux Tribe)
- ☒ Region 9: Carlotta (Carley) Whitecrane (Karuk
Tribe)
- ☐ Region 9 *Alternate*: Vacant
- ☐ Region 10: Lee Juan Tyler (Shoshone-Bannock
Tribes)
- ☐ Region 10 *Alternate*: Kelly Wright (Shoshone-
Bannock Tribes)
- ☒ Region 10 (Alaska): Alexis Wagner (Metlakatla
Indian Community)

Support Personnel

- ☒ Monica Rodia, TSC Executive Secretary
- ☒ Kristen LeBaron, Support Contractor (SCG)

Action Items

1. TSC members will read the monthly teleconference minutes to ensure that they are aware of current activities, news and action items.
2. Karen Gude will forward to Monica Rodia the Alaska Native Tribal Health Consortium (ANTHC) presentation on per- and polyfluoroalkyl substances (PFAS) in rural Alaska.
3. Karen will send to Monica information about EPA's regulatory determinations on drinking water for the Candidate Contaminant List.

EPA Caucus

- ☐ Region 1: Vacant
- ☒ Region 2: Kai Tang
- ☐ Region 3: Regina Poeske
- ☐ Region 4: Dawn Taylor
- ☒ Region 5: Luke Hullinger
- ☐ Region 5 *Alternate*: Carole Braverman
- ☒ Region 6: Alexandra (Alexa) Olson
- ☒ Region 7: Christopher (Chris) Taylor
- ☐ Region 7 *Alternate*: Amber Tilley
- ☐ Region 8: Alfred Basile
- ☐ Region 9: Rebecca Jamison
- ☐ Region 10: Lon Kissinger
- ☐ AIEO: Francine St. Denis
- ☐ OAR: Amanda Kaufman
- ☒ OCHP: Ted Coopwood
- ☐ OCSPP: Karen Hamernik
- ☒ OCSPP *Alternate*: Amanda Hauff
- ☐ OLEM: David Charters
- ☒ OMS: Beth Jackson
- ☒ ORD: David Jewett
- ☒ ORD: José Zambrana, Chair
- ☒ OW: Karen Gude

Invited Speakers and Guests

- ☒ Jim Duffield, Hopi Water Resources Program
- ☒ Shasta Gaughen, Pala Band of Mission Indians
- ☒ Crystal Robinson, Quartz Valley Indian
Reservation

Key Discussion Points

Roll Call and Distribution of Meeting Minutes

- Monica took the roll and explained that the January meeting minutes had been finalized and distributed.
- TSC members should read the minutes each month to ensure that they are aware of current activities, news and action items.

Caucus Report Outs

- José Zambrana reported that the EPA Caucus had met and discussed the following items:
 - Tribal needs related to PFAS.
 - The possibility of presenting a symposium on indigenous research methodologies during the fall annual meeting of the Society of Environmental Toxicology and Chemistry (SETAC), which will be held in Texas; indigenous peoples from Mexico, Central America and South America will be invited to attend if SETAC accepts the symposium proposal.
 - The continuing work of the National Tribal Toxics Council (NTTC) on tribal risk exposure scenarios and fish consumption rates to help EPA risk assessors.
- Neil Patterson reported that the Tribal Caucus had met the previous week and discussed the following topics:
 - The need for Tribal Representatives to serve on the Agenda Development Team for the upcoming TSC face-to-face meeting.
 - How to approach tribes to encourage them to share their indigenous research methodologies and protocols so that the TSC then can further share these best practices and lessons learned for the benefit of other tribes.
 - Tribal engagement needs related to PFAS.
 - The National Tribal Caucus' interest in fostering collaboration among the EPA-Tribal Partnership Groups.
 - Possible topics of interest for the May face-to-face meeting agenda, including concentrated animal feeding operations (CAFOs) and any experiences Eastern Band of Cherokees may have had with local CAFOs.

PFAS and Tribal Engagement

- EPA and other federal agencies are attempting to address PFAS concerns, and this topic has been discussed during previous TSC meetings.
- EPA would like to know about any concerns that tribes may have about PFAS (e.g., potential PFAS contamination on tribal lands). EPA's Office of Research and Development has been providing technical assistance to states on request.
- Region 2 staff visited EPA Headquarters the previous week and shared that PFAS is a major topic of concern for the region, particularly in Puerto Rico after the earthquake.

- Shasta Gaughen is not aware of any tribal PFAS issues in Region 9.
- Craig Kreman is aware of some PFAS issues in northeast Oklahoma, but his impression is that EPA's response is focused on urban versus rural areas. He noted that some states are attempting to set their own standards because of a lack of federal standards. José noted that some concern exists about rural areas where firefighting exercises have occurred and fire-extinguishing foam containing PFAS has been used.
- Page Hingst has been trying to identify tribes in her region that are affected, but she has been unable to identify any. Tribes may be affected without being aware because they are unable to test for PFAS. Craig agreed that the cost of PFAS testing may be prohibitive for smaller communities.
- Karen explained that the ANTHC gave a presentation on PFAS in rural Alaska at the November 2019 Alaska Tribal Conference on Environmental Management. She will forward the presentation to Monica to distribute to the TSC.
- It would be helpful for EPA to present about the Agency's PFAS action plan to the TSC.
- EPA recently announced its regulatory determinations on drinking water for the Candidate Contaminant List and how the Agency will regulate contaminants under the National Primary Drinking Water Regulations within the Safe Drinking Water Act. EPA has proposed regulatory determinations in drinking water for the PFAS substances perfluorooctanesulfonic acid and perfluorooctanoic acid (commonly known as PFOS and PFOA, respectively). The 60-day public comment period currently is open. Karen will send the information to Monica to distribute to the TSC.

EPA-Tribal Partnership Groups

- The TSC would like to ensure communication and collaboration among EPA-Tribal Partnership Groups on topics of mutual interest. The National Tribal Caucus is interested in fostering collaboration among the groups and plans to develop something in writing to this effect. It may be beneficial to wait until the document is released before the TSC makes formal collaboration plans.
- The Tribal Waste and Response (TWAR) Steering Committee is developing its 2020 priorities document, which Page should be able to share with the TSC in March. TWAR had discussed PFAS but decided not to make it a 2020 priority because the current effects on tribes are unknown. Craig added that a Quapaw Tribe staff member serves on TWAR.
- The National Tribal Water Council has invited Dianne Barton (NTTC Chair) and Page to participate on its call on March 11. Neil will participate as well.
- Craig serves on the National Tribal Air Association (NTAA) and has served on the Tribal Air Monitoring Support Center Steering Committee. A good deal of recent discussion relates to policy, and NTAA has developed a policy resource kit. NTAA also has discussed air sensors and low-dose monitoring and has met with Alaska Native villages. Tribes are interested in air monitoring issues.
- In terms of additional air issues that the TSC could explore, Katie Tiger explained that PFAS also is an air issue of concern. The North Carolina Division of Air Quality performed an investigation on GenX and realized that it is being transported through the air. Those involved in this investigation potentially could present at either of the two upcoming TSC face-to-face meetings.
- Another possible air topic of interest is EPA's upcoming 5-year review of ozone and particulate matter criteria for the National Ambient Air Quality Standards and how the standards are developed to protect air quality.

Science Seminar: Science and Restoration on the Hopi Reservation in Arizona, Jim Duffield, Hydrogeologist, Hopi Water Resources Program

- Jim Duffield explained that the Hopi Reservation is located on the high-desert Colorado Plateau in northeast Arizona within the Little Colorado River Valley. The Hopi Tribe has resided in this location for more than 1,500 years. The 2,500-square-mile reservation is surrounded by the Navajo Nation.
- Hopi District Six is the heart of the Hopi and comprises a broad plateau (Black Mesa) dissected by northeast-oriented canyons that divide the plateau into mesas. The Hopi Villages are located on the First, Second and Third Mesas.
- Surface water on the reservation is rare, with local streamflow dominated by precipitation events. Hopi wetlands are almost exclusively associated with groundwater discharge, either at springs or in riparian zones.
- The Hopi Reservation includes seven aquifers, with the Toreva Formation (T), Dakota Formation (D), Navajo Formation (N) and Coconino Formation (C) aquifers being the most important. Most wetlands are formed at discharge points from the T and N aquifers.
- The rocks forming the aquifers have a significant amount of folding, which allows water to infiltrate the N aquifer in higher areas, ultimately creating a pressure head above the N and D aquifers. The water in the D aquifer is not potable for humans, so the tribe must ensure that the piezometric surface does not come below the top of the D aquifer, which would result in lower quality water from the D aquifer infiltrating the N aquifer.
- The T aquifer is shallow and easily affected by nutrients, *Escherichia coli*, and other human and animal activities.
- The N aquifer is the sole-source aquifer for the Hopi Tribe and Navajo Nation and allows these tribes to live on the plateau. This aquifer has high arsenic levels on the east end of the reservation.
- As a result of the Little Colorado Water Rights Lawsuit, the Hopi and Navajo were given a settlement of approximately \$750 million each.
- Much of the work of the Hopi Water Resources Program is related to groundwater-dependent ecosystems, including the sampling of wetlands, range wells and landfill-monitor wells. One challenge is that some Hopi residents drink out of range wells that may be fed by the D aquifer, so the program completes comprehensive water sampling when it is made aware of such usage and then acts appropriately according to the results.
- The Hopi Water Resources Program also performs sampling on surface water to determine the water quality for the tribe's competitive Clean Water Act (CWA) 104(3)(b) Wetlands Grant and ensure that the water in the local spring, which serves as the local water source, is of good quality. The results are compared with the tribe's water quality standards.
- Hopi wetlands often are small and remote, but they are of critical importance to the tribe as water sources. One wetland is threatened by open dumping, and another is choked with trees. The tribe obtained a competitive wetlands grant to assess these wetlands and examine different remote-sensing methods to determine which is the most cost effective. Infrared sensors and a drone equipped with LIDAR were examined, and the program determined that the LIDAR costs could not be justified, as the data could be obtained through more cost-effective methods. The ultimate goal is to ensure that the groundwater-dependent ecosystems display the characteristics of a healthy wetland (e.g., maintain diverse plant and animal populations, do not contain *E. coli*).

- The wetlands are of cultural significance to the Hopi Tribe, including the culturally significant plants and animals that they support, allowing the Hopi to survive in the area for millennia.
- The Hopi Water Resources Program also performs nonpoint source work under a nonpoint source competitive grant. Hotevilla Spring is an example of a nonpoint source on the reservation.
- The reservation has legacy uranium contamination from the Tuba City open dump and a Rare Metals Corporation uranium processing mill.
- Under the Hopi Arsenic Mitigation Project, two wells were installed near the recharge area to provide groundwater to the eastern Hopi because of the naturally occurring arsenic in the area. The Hopi Cultural Center has been out of arsenic compliance for years; attempts are being made to bring it into compliance.
- The Hopi Water Resources Program receives funding from Hopi H-13 General Funds, which will be discontinued soon; CWA 106, 319 and 104(b)(3) grants; Bureau of Reclamation Native American Technical Assistance funds; and the Bureau of Indian Affairs (BIA), which helps to fund Tuba City open dump cleanup.
- The Hopi Water Resources Program never loses sight of the fact that water resources are important to preserve the health and safety of the residents of the Hopi Reservation, including elders and children. The goal is to preserve Hopi lands for future generations.
- To protect its water resources, especially given its remote location, the tribe needs a more-educated workforce, manpower, funding that is more comparable to that given to states, training in basic professional skills (e.g., writing, data input) and environmental science, and lower match requirements from federal agencies.
 - Most Hopi people prefer to stay on the reservation to enjoy their unique way of life rather than leave to seek a college education, which reduces the applicant pool and impedes the development of a robust environmental program.
 - It would be helpful for EPA to develop a modular environmental science technical award or certification that would allow tribal members to learn basic composition, technical writing, data input, and other basic skills that allow reporting. Many programs fail because of lack of reporting to EPA rather than lack of sampling and other work. The work has been completed, but without the ability to report it to EPA, it is as if the work has not been done.
 - The tribe has lost out on grants because it does not have the required matching funds.
- Craig asked what material was used to cap the legacy uranium facility. Jim responded that it is an engineered cover. He thought that clays covered the tailings, with coarser material moving up. The cover was installed by the U.S. Department of Energy and its contractors, and the facility is not located directly on the reservation, so he does not have the full details.
- Craig asked whether the eastern towns provide additional treatment to the water that they receive from the two wells that were installed to mitigate arsenic. Jim responded that the towns must lower the pH of the water from the N aquifer before performing arsenic scrubbing. The tribe has asked for arsenic technical assistance from local BIA staff, but EPA funds cannot be used to fund work done by another federal agency, so BIA funding to allow their local staff to perform the requested assistance will be needed.
- José asked whether the tribe sets its own water-quality standards. Jim responded that the tribe has set its own standards, which follow federal guidelines with modifications for cultural purposes.

Next TSC Teleconference

- The next TSC teleconference will be held on Monday, March 16, from 2:00 to 3:30 p.m. EDT.